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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,684	06/20/2003	Shinichi Kurita	007389 DISPLAY/AKT	6726
41161	7590	03/08/2005	EXAMINER ELLIS, SUEZU Y	
DUGAN & DUGAN, PC 55 SOUTH BROADWAY TARRYTOWN, NY 10591			ART UNIT 2878	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/600,684

Applicant(s)

KURITA, SHINICHI

Examiner

Suezu Ellis

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 1-4 and 6-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on July 25, 2003 and January 6, 2004 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Specification***

Claims 1-4 and 6-8 are objected to because of the following informalities:

With respect to claims 1 and 7, the term "a substrate" is mentioned in pp.11, line 5 and pp. 12, line 21. The term "a substate" is mentioned again on pp.11, lines 11 and 17 and on pp. 12, lines 28 and 33. Is this the same substrate as previously mentioned? If so, the article --the-- should be used in place of "a".

With respect to claims 2-4, 6 and 8, the term "a substrate" is mentioned on pp. 11, lines 23 and 28; pp.12, lines 2 and 13; and pp. 13, line 6. Is this the same substrate as mentioned in claim 1 or 7, from which these claims depend upon, or are these different substrates? If the substrate is the same as that mentioned in claim 1 or 7, the article --the-- should be used in place of "a".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 5-11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Freerks et al. (US 5,980,194). Hereafter, Freerks et al. will be referred to as Freerks.

With respect to claims 1 and 7, Freerks discloses in Fig. 2, an apparatus that detects wafers (functionally equivalent to substrates) which includes a transmitter/receiver unit (60 and col. 7, lines 40-43), a reflector (62) that reflects the transmitted light toward the transmitter/receiver unit, and a controller (68) coupled to the transmitter/receiver unit that determines the substrate position (col. 7, lines 20-25). Note, controller is provided with information by a wafer detection sensor (60), wherein the output from the detector changes based upon the intensity of reflected light that is received, which in this instance no intensity is received with the presence of the wafer (col. 7, lines 31-35). Fig. 2 further illustrates the transmitted and reflected light striking the substrate (10) at a non-normal angle within a transfer chamber (16). Freerks further discloses in Fig. 1A, prior art that illustrates a transfer chamber (16) coupled to multiple processing chambers (6) and to a chamber (12). Note, chamber (12) is functionally equivalent to a load lock chamber since the wafers are loaded into and from the process system via chamber (12) (col. 4, lines 56-59).

Freerks fails to disclose light transmitting through the wafer (col. 7, lines 7-10). However, the ability for light to be transmitted through the wafer is dependent on the material of the wafer or the wavelength of the light being used, such as x-rays. Since the applicant is not claiming the wafer, no patentable weight is being given to the light being transmitted through the wafer.

With respect to claims 2, 5 and 8, Freerks discloses in Fig. 2 the transmitter/receiver unit (60) and the reflector (62) are angled relative to the path of the substrate, thus allowing the incident light to hit the substrate at a non-normal angle. Although the figure does not illustrate parallel lines for the light beams being transmitted and reflected, the figure illustrates one beam for the light transmitted and reflected, thus the light beam is reflected on the same path as it is transmitted (col. 7, lines 55-60).

With respect to claims 9-11 and 14, the method is inherent to the apparatus as described above.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freerks et al. (US 5,980,194). Hereafter, Freerks et al. will be referred to as Freerks.

Freerks discloses all the limitations above. However, he fails to disclose the angle of the light beam striking the substrate between 2-6 degrees from normal incidence or at an angle of about 3.8 degrees from normal incidence. However, it would have been obvious to a person of ordinary skill in the art to adjust the angle of the beam striking the substrate in order to decrease the detection of light reflected from the substrate and thus provide a more accurate reading from the detector. Note, Freerks illustrates in Fig. 2 that the transmitter/receiver unit can be adjusted via holder (44) (col. 7, lines 61-63), thus by adjusting the holder, the angle of the light beam may also inherently be adjusted.

#### ***Telephone/Fax Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suez Ellis whose telephone number is 571-272-2868. The examiner can normally be reached on 8:30am-5pm (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2878

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**DAVID PORTA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**